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10/808,856	03/25/2004	Michael Lester Kerns	DN2001-192D01	6677

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The Goodyear Tire & Rubber Company  
Patent & Trademark Department - D/823  
1144 East Market Street  
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EXAMINER
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PATEL, PRITESH ASHOK

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3763

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/808,856  
Filing Date: March 25, 2004  
Appellant(s): KERNS ET AL.

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Alvin T. Rockhill  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 12/22/2010 appealing from the Office action mailed 07/21/2009.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

United States Patent Application Serial No. 10/868,160

United States Patent Application Serial No. 10/686,160

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

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4433107	Takeuchi et al.	2-1984
3541063	Throckmorton et al.	11-1970

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

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prior art under 35 U.S.C. 103(a).

Claims 1, 2, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Case (US 4405317) in view of Takeuchi et al. (US 4433107).

Concerning claims 1 and 2, Case discloses a syringe (10) comprising a barrel (12) having a fluid chamber, a proximal end, a distal end, an elongated tip stemming from element (22), a plunger rod (16), and a ribbed stopper (50), comprised of rubber (Fig 1). Case does not disclose a neodymium polyisoprene rubber. Takeuchi et al. discloses a polyisoprene rubber synthesized using a neodymium element (column 4 lines 22-25). It would have been obvious to one of ordinary skill in the art at the time of the invention that a synthesized rubber made with neodymium would be a neodymium polyisoprene rubber. It would further have been obvious to one of ordinary skill in the art at the time of the invention to modify Case with a neodymium polyisoprene as taught by Takeuchi et al. to use a purer form of rubber.

Concerning claims 16 and 17, in addition to the above disclosure, Case discloses a second barrel (16) with ribbed stopper (26), said second barrel slidably connectable with first barrel so as to mix to substance together before delivery (Fig 1).

Claims 3-15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Case in view of Takeuchi et al. in further view of Throckmorton et al. (US 3541063).

Concerning claims 3 and 18, Case in view of Takeuchi et al. fails to disclose a catalyst mechanism. Throckmorton et al. discloses a catalyst system including an organoaluminum compound, an organoneodymium compound, and at least one

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compound having a labile halide ion (column 2 line 30, column 3 lines 1-5, and column 3 line 39). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Case in view of Takeuchi with a catalyst system as taught by Throckmorton et al.

Concerning claims 4, 5, and 19 Throckmorton et al. discloses an organoaluminum compound and some examples of them (column 2 lines 30-58).

Concerning claims 6-10, Throckmorton et al. discloses an organoneodymium compound and a list of possible ligands 1 to 20 carbons long (column 2 line 60-72 and column 3 lines 1-33).

Concerning claims 11-14, Throckmorton discloses a labile halide ion (column 3 lines 38-50). It would have been obvious to one of ordinary skill in the art at the time of the invention that though only organometallic halides are provided in detail any labile halide could be used as the third catalyst component.

Concerning claim 15, a range of ratios for the various compounds in the catalyst are provided (column 3 lines 64-72).

#### **(10) Response to Argument**

**Appellant's first argument** regarding the rejection of claims 1, 2, 16, and 17 under Case (USPN 4405317) in view of Takeuchi et al. (USPN 4433107) directed towards a synthesis of polyisoprene rubber made with a neodymium rubber having an added advantage not disclosed in the prior art.

Appellant's Representative asserts that the references do not disclose a teaching to combine Case in view of Takeuchi et al.

Appellant indicates that neither Case nor Takeuchi et al. discloses a teaching that renders obvious a manufacturing of a syringe plunger stopper utilizing polyisoprene rubber that is synthesized utilizing a neodymium catalyst.

It is the Examiner's position that Takeuchi et al. discloses a teaching for improving a rubber in which a rubber is made that is more easily manufactured making it applicable in many areas (Column 1 lines 1-42 of Takeuchi et al.).

Appellant indicates that Takeuchi et al. does not disclose a neodymium rubber exclusively but instead teaches a blending of neodymium polyisoprene rubber with other types of rubber.

It is the Examiner's position that the appellant's claim language "comprised of neodymium polyisoprene rubber" does not preclude a mixture of neodymium polyisoprene rubber with another type of rubber (claim 1).

Appellant indicates that a neodymium polyisoprene rubber provides unexpected benefits when used as a syringe plunger stopper.

It is the examiner's position that appellant does not site nor prove any unexpected benefits for using a neodymium polyisoprene rubber other than that natural rubbers cause unwanted allergic reactions, a known fact in the art.

**Appellant's second argument** regarding the rejection of the claims 3-15, 18, and 19 under Case in view of Takeuchi et al. in further view of Throckmorton (USPN 3541063) directed towards there being no motivation to combine the teachings of Throckmorton with either of the other references.

It is the Examiner's position that a neodymium catalyst system as taught by

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Throckmorton is combinable with Takeuchi et al. as the latter reference teaches a neodymium polyisoprene rubber that must use a catalyst in a process for making such a rubber. And as Takeuchi et al. teaches a better manufacturing practice as cited above, Case is modified by Takeuchi et al. and further modified by Throckmorton.

**(11) Related Proceeding(s) Appendix**

Copies of the court or Board decision(s) identified in the Related Appeals and Interferences section of this examiner's answer are provided in the case history United States Patent Application 10/868,160.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/P. P./

Examiner, Art Unit 3763

Conferees:

/Nicholas D Lucchesi/

Supervisory Patent Examiner, Art Unit 3763

/Tatyana Zalukaeva/

Supervisory Patent Examiner, Art Unit 3761